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10/597,971	08/15/2006	Leon Maria Van De Kerkhof	NL040150	8747
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/597,971	VAN DE KERKHOF, LEON MARIA	
	<b>Examiner</b>	<b>Art Unit</b>	
	HAI PHAN	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 August 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-22 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-22 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 15 August 2006 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/13/2006</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

1. This Office Action is in response to the Applicants' communication filed on 08/15/2006. In virtue of this communication, claims 1-22 are currently pending in the instant application.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **the system as recited in claim 20** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. The drawings are also objected to because they do not contain descriptive text labels.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### **Priority**

5. Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### **Information Disclosure Statement**

6. The information Disclosure Statement (IDS) Form PTO-1449, filed on 12/13/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosed therein was considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. Claims 1-4 and 8-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumgarte et al (U.S. Pub No. 2003/0236585, hereinafter referred to as Baumgarte).

Regarding claim 1, Baumgarte discloses a multi channel audio encoder (Fig 2) comprising means for receiving (202L and 202R), a parametric multi channel encoder (202L and/or 202R, 208, 212 and 216) which generates single channel signal (204LO and/or 206LO) and multi channel parameters (BCC parameters 108) where the multi channel parameters comprising information related to the single channel signal (204HI and/or 206HI), multi channel intensity encoder (216), and means for generating (216, 214L and 214R).

Regarding claims 2-3, Baumgarte further discloses the multi channel parameters comprise the intensity difference parameters that are relative to the intensity data (para 0008, lines 8-12).

Regarding claim 4, Baumgarte further discloses the inter-channel time difference parameters (para 0008, lines 10-12).

Regarding claims 8-9, Baumgarte further discloses means for dividing the input signal (Fig 2, signal L and/or R) into high frequency band signal (204HI and/or 206HI) and low frequency band signal (204LO and/or 206LO), and means for encoding the low frequency band signal (214L and/or 214R).

Regarding claim 10, Baumgarte further discloses the encoder is stereo (para 008, line 1-3).

Regarding claim 11, Baumgarte further discloses that the encoded signal and the parameters can be encoded as a single data stream (para 0020, lines 4-9).

Regarding claim 12, the encoder of Baumgarte as explained in the rejected claim 1 above also anticipates the method as claimed.

Regarding claims 13 and 15, Baumgarte discloses the multi channel audio decoder (Fig. 3) comprising the means for receiving (302L, 302R, 312), intensity decoder (312), parametric decoder (308, 312).

Regarding claim 14, Baumgarte's decoder is operable to modify the intensity (i.e. the level) base on the intensity information (interaural level difference) that was encoded on the encoder side (para 0008, lines 8-9).

Regarding claim 16, Baumgarte's decoder is operable to modify the intensity (i.e. the level) base on the intensity information (inter-aural level difference) that was encoded on the encoder side (para 0008, lines 8-9). The decoded signal is the mono signal (para. 0029 and 0030).

Regarding claim 17, the decoder of Baumgarte as explained in the rejected claim 13 above also anticipates the method as claimed.

Regarding claims 18-19, Baumgarte further discloses a computer program that is enable to carry out the encoding method, and where the computer program can be implemented in the memory and be executable by other electronic storage medium (para 0043, 0045, and 0046).

Regarding claim 20, Baumgarte discloses in Fig 1 the system including the encoder (Fig 2) and decoder (Fig 3) as explained in rejecting claims 1 and 13 above.

Regarding claims 21-22, the encoding method as discussed above constitutes the claimed multi channel audio signal.

9. Claims 1-5, 8, and 10-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Breebaart (U.S. Patent 7,447,629).

Regarding claim 1, Breebaart discloses a multi channel audio encoder (Fig.1, element 101) comprising means for receiving an input multi channel signal (input unit 111), a parametric multi channel encoder (Fig 2, element 202, 203) for generating single channel signal (L) and multi channel parameters (P2), a multi channel intensity encoder (element 201), and means for generating encoded audio output data (206).

Regarding claim 2, Breebaart further discloses that the multi channel parameters comprise inter-channel intensity difference parameters (interaural level difference, col. 8, lines 42).

Regarding claim 3, Breebaart further discloses that IID are difference parameters relative to the intensity data (the interaural level difference as defined by the relative levels of the corresponding band-limited signals stemming from the two inputs, col. 8, lines 54-56).

Regarding claim 4, Breebaart further discloses the inter-channel time difference parameters (col. 8, lines 42-43).

Regarding claim 5, Breebaart further discloses the inter-channel cross-correlation parameters (col. 8, lines 42 and lines 58-60).

Regarding claim 8, Breebaart further discloses means for dividing (element 202 or 203) diving the LF and LR into first part (P2 or P3) and second part (L or R), means for encoding the second part (201), and means for generating (206) operable to include the signals generated from means for encoding (201).

Regarding claim 10, Breebaart further discloses that the encoder is the stereo encoder (four-channel as disclosed in col. 5, lines 60-62; or five-channel encoder as shown in col. 7, lines 6-8).

Regarding claim 11, Breebaart further discloses that the element 206 generates a combined signal 207 as a single data stream (col. 6, lines 13-19).

Regarding claim 12, the encoder of Breebaart as explained in the rejected claim 1 above also anticipates the method as claimed.

Regarding claims 13 and 15, Breebaart discloses the multi channel audio decoder (Fig. 1 element 105 and Fig 3) comprising the means for receiving (306), intensity decoder (301), parametric decoder (302, 303).

Regarding claim 14, Breebaart's decoder is operable to modify the intensity (i.e. the level) base on the intensity information (interaural level difference) that was encoded on the encoder side (col 6, lines 47-49).

Regarding claim 16, Breebaart's decoder is operable to modify the intensity (i.e. the level) base on the intensity information (interaural level difference) that was encoded on the encoder side (col 6, lines 47-49). In the case of five-channel transmission, Breebaart's decoder would include an additional mono channel, thus the first decoded signal would be mono (col. 7, lines 56-61).

Regarding claim 17, the decoder of Breebaart as explained in the rejected claim 13 above also anticipates the method as claimed.

Regarding claims 18-19, Breebaart further discloses a computer program that is enable to carry out the encoding method, and where the computer program can be implemented in the memory and be executable by other processing means (col. 3, lines 10-19).

Regarding claim 20, Breebaart discloses in Figs 1-3 the system including the encoder and decoder as explained in rejecting claims 1 and 13 above.

Regarding claims 21-22, the encoding method as discussed above constitutes the claimed multi channel audio signal.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumgarte et al (U.S. Pub No. 2003/0236585, hereinafter referred to as Baumgarte) and Schuijers et al (U.S. Pub No. 2006/0147047, hereinafter referred to as Schuijers).

Regarding claims 6-7, Baumgarte fails to identify that the intensity data comprises scale factors for multiple channels and the parameters comprises the scale

factor difference values relatives to the individual scale factors of the intensity data.

However, Schuijers discloses similar encoder using the parametric encoding technique where he uses the mono signal to combine with the time-varying and frequency-dependent scale factors or intensity factors in his intensity stereo algorithm. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the scale factors as suggested by Schuijers into the encoder of Baumgarte's because this would allow transmission of stereo audio signal at a low bit rate.

Regarding claim 5, even though Baumgarte discloses the inter-channel intensity difference parameters and the inter-channel time difference parameters, he does not identify the inter-channel cross correlation parameters. However, this inter-channel cross correlation parameters are well known in the art of parametric encoding, as suggested by Schuijers in para 0011. Therefore, it would have been obvious to a person of ordinary skill in the art to utilize inter-channel cross correlation parameters besides the inter-channel intensity difference parameters and the inter-channel time difference parameters because this would broaden the possibility of parametric encoding in Baumgarte's encoder.

12. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breebaart (U.S. Patent 7,447,629) and Schuijers et al (U.S. Pub No. 2006/0147047, hereinafter referred to as Schuijers).

Regarding claims 6-7, Breebaart fails to identify that the intensity data comprises scale factors for multiple channels and the parameters comprises the scale factor difference values relatives to the individual scale factors of the intensity data. However, Schuijers discloses similar encoder using the parametric encoding technique where he uses the mono signal to combine with the time-varying and frequency-dependent scale factors or intensity factors in his intensity stereo algorithm. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the scale factors as suggested by Schuijers into the encoder of Breebaart's because this would allow transmission of stereo audio signal at a low bit rate.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breebaart (U.S. Patent 7,447,629) and Baumgarte et al (U.S. Pub No. 2003/0236585, hereinafter referred to as Baumgarte).

Regarding claim 9, Breebaart fails to teach that the second part corresponds to a low frequency band of the input signal where the first part corresponds to the high frequency of the input signal. Baumgarte discloses similar type of encoder where he discloses means for dividing the input signal (Fig 2, signal L and/or R) into high frequency band signal (204HI and/or 206HI) and low frequency band signal (204LO and/or 206LO), and means for encoding the low frequency band signal (214L and/or 214R), and the high frequency band signal is used as part of the parametric encoding (by parameter generator 216). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of

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high and low frequency band separation as taught by Baumgarte into the encoder of Breebaart's so that mono signal(s) can be generated and be encoded such that low-data bit stream can be obtained thus reducing the transmission bandwidth requirement.

***Claim Rejections - 35 USC § 112***

14. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

15. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to describe the record carrier as recited in claim 19.

***Claim Rejections - 35 USC § 101***

16. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

17. Claims 12, 17-19 and 21-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 12 and 17, these claims are directed to a process. Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory process under 35 U.S.C. 101 must (1) be tied to another statutory category (such as particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing, where such transformation impose a meaningful limit on the claim's scope and involve more than insignificant extra-solution activity. While the claims recite the series of steps or act to be performed, the claims neither transform underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. Furthermore, the steps recited in these claims appear to be implementable by a software program (as evidenced by claim 18, and the specification, page 14, lines 29-31).

Regarding claims 18-19, these claims recite the computer program and the record carrier which are non-structural per se, which is actually a software program that is not a patentable subject matter.

Regarding claims 21-22, these claims direct to a signal. The claimed signal cannot be interpreted to fall within one of the four patent-eligible subject matter categories of process, machine, manufacture, and composition of matter. Therefore, the claimed signal is considered non-statutory subject matter.

***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAI PHAN whose telephone number is (571)272-0486. The examiner can normally be reached on Monday-Friday (9:00AM-5:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 571-272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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